

Form PTO-1449 INFORMATION DISCLOSURE CITATION IN AN APPLICATION (Use several sheets if necessary)	Docket Number (Optional)	Application Number
	Applicant Cao	
	Filing Date	Group Art Unit

10759 U.S. PTO
10/07/3823
02/11/02

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

		"All-Cure Standard and Custom Dental Curing Lightguides" (1 page) (Printout from www.all-cure.com)
		"Welcome to Bonart Medical Supply" (2 pages) (printout from www.bonartmed.com)
		"Bonart" (4 pages listing dental equipment including ART-L1 'High Power Light Curing Unit') (printout from www.bonartmed.com)
		"Dentamerica - Litex" (2 pages discussing Litex 680A, Litex 682, and Litex 692 curing lights) (printout from www.dentamerica.com)
		"Problems with the Apollo E curing light" (1 page article) (printout from www.imakenews.com)
		"Bellini X Ray" (2 pages depicting Sunlite 1275 curing light) (printout from www.bellinixray.com)
		"ACTA CURING LIGHT" (2 pages) (printout from www.amadent.com)
		"Laser Technology in Dentistry" (3 pages) (printout from dentistry.about.com)
		"Synopsis of Visible Light Curing Units" (8 pages summarizing various curing lights) (printout from www.brooks.af.mil)
		"Zap Dual Curing Light" (2 pages) (printout from www.brooks.af.mil)
		"Vivalux II Cordless Polymerization Unit" (2 pages) (printout from www.brooks.af.mil)
		"VersaLux Cordless Curing Light" (2 pages) (printout from www.brooks.af.mil)
		"Variable Intensity Polymerizer Light Curing Unit (VIP)" (3 pages) (printout from www.brooks.af.mil)
		"Spectrum 800 Curing Unit" (2 pages) (printout from www.brooks.af.mil)
		"Optilux 501 Polymerization Unit" (2 pages) (printout from www.brooks.af.mil)
		"Optilux 500 Polymerization Unit" (2 pages) (printout from www.brooks.af.mil)
		"Optilux 180 & 360 Polymerization Units" (2 pages) (printout from www.brooks.af.mil)
		"Hilux 350 Curing Light" (2 pages) (printout from www.brooks.af.mil)
		"Epilar Highlight Curing Light" (2 pages) (printout from www.brooks.af.mil)
		"Apollo 95E Curing Light" (2 pages) (printout from www.brooks.af.mil)
		"ARC Light II" (2 pages) (printout from www.brooks.af.mil)

EXAMINER	DATE CONSIDERED
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Form PTO-1449

INFORMATION DISCLOSURE CITATION IN AN APPLICATION

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Applicant

Cao

Filing Date

Group Art Unit

 19759 U.S. PTO
10/073823


U.S. PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

RL		"Savings on Curing Lights from Lone Star Dental Corp.", including First Medica Hilux 200, Spring Health Powerlite and Dentamerica Litex (1 page) (printout from www.denteqip.com).
		"LED Curing Light" from TOESCO Yoshida Toei Engineering Co., Ltd. (October 2001).
		"Dental/Medical Diagnostic Systems, Inc. Receives \$4.0 Million Order for Its Wireless Apollo e and Wavelight Curing Unites Based on New LED Technology" (2 pages) (printout from www.compoundsemiconductor.net).
		"Heat Data" (2 pages) (regarding rise in tooth pulp temperature with various curing lights).
		"Comparison to Other Curing Lights" (2 pages) (printout from www.cranews.com)
		"Curing Performance" (4 pages) (printout from www.cranews.com)
		"Technical Data" (3 pages) (printout from www.cranews.com)
		"Photographs" depicting Virtuoso curing light (printout from www.cranews.com)
		Caughman, et al., "In Vitro Intrapulpal Temperature Rise with a Variety of Light Sources" (1 page).
		Bouschlicher, et al., "Intrapulpal Temperature Increases with LED, QTH and Arc Photoinitiation" (1 page).
		Meyer et al., "Decrease in Power Output of Blue LD Curing Lights with Increasing Distance to Filling Surface" (1 page).
		Parr et al., "Spectral Analysis of Commercial LED Dental Curing Lights" (1 page)
		CRA Newsletter, Vol. 20, Issue 3, "Intraoral Resin Curing Lights", (March 1996) (2 pages).
		CRA Newsletter, "Resin Curing Light, Cordless" (2 pages).
		CRA Newsletter, "Visible Curing Lights" (4 pages).
		"Power PAC" (3 pages) (printout from www.americandentaltech.com)
		"The PAC" (2 pages) (printout from www.americandentaltech.com)
		"The Science of Curing" (8 pages) (printout from www.lasermed.com)
		"The Accucure 1000" (2 pages) (printout from www.lasermed.com)
		"The Accucure 3000" (2 pages) (printout from www.lasermed.com)
RL		"RemeCure CL15" (1 page) (printout from www.remedent.com)

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9/24/2004

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U.S. PATENT DOCUMENTS

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PL		"LumaLite Luma 8, LumaArch, LumaCure" (4 pages) (printout from www.luma-lite.com)
		"Curing Light XL 3000" (3 pages) (printout from www.brooks.af.mil)
		"LumaCure Cordles Curing Light" (2 pages) (printout from www.brooks.af.mil)
		"Compo-T VLC Visible Light Cure Composite Dental Restorative Materials" (4 pages) (Printout from www.yates-motloid.com)
		Bayne et al, "Update on dental composite restorations", JADA, vol. 125, June 1994, pages 687-701.
		"Accucure 3000" brochure (2 pages)
		"Accucure 1000" brochure (2 pages)
		"LaserMed AGD Show Special AccuCure 3000 Laser Show Special" flyer (1 page)
		"LumaCure" flyer (1 page).
		"ARC Light IIM" brochure (2 pages).
		"Introducing the Apolloelight wireless curing light" flyer (1 page).
		"Just Cure It" brochure (3 pages) (printed out from www.airtechniques.com)
		"Resin Curing Lights: What You Should Know", page 36 from Contemporary Esthetics and Restorative Practice, November, 2001.
		"Starlight Starlight p" flyer (1 page).
		"Exelite" flyer (1 page)
		"Epilar FreeLight" flyer (1 page).
		"Centrix, Introducing VersaLux the world class battery operated LED curing light that fits in the palm of your hand (July-August 2001) (1 page)
		"ZAP Dental Curing" flyer (1 page)
		"EXELITE" flyer (1 page)
		"Elipar Freelight Curing Light" (2 pages) (printout from cms.3m.com)
		"Intraoral Resin Curing Lights - Update '96" excerpt from March 1996 CRA newsletter (2 pages).

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U.S. PATENT DOCUMENTS

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Form PTO-1449

**INFORMATION DISCLOSURE CITATION
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Group Art Unit

JC398 U.S. PTO

10/073823

02/11/02

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

"3M ESPE Introduces New LED Curing Light" (2 pages) (printout from cms.3m.com)

"NRG L.E.D. Curing Light" brochure (4 pages).

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#4

Sheet 1 of 8

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INFORMATION DISCLOSURE CITATION
IN AN APPLICATION

(Use several sheets if necessary)

Docket Number (Optional)

03761.046/5061.18

Application Number

10/073,823

Applicant Cao

Filing Date 02/11/02

Group Art Unit 2873

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

RL		Guido Goracci, Giovanni Mori, Luca Casa de Martinis, "Curing light intensity and marginal leakage of resin composite restorations", Quintessence International, volume 27, number 5/1995 (8 pages)
		Hiromasa Kato, "Relationship between the velocity of polymerization and adaptation to dental cavity wall of light cured composites", Dental materials Journal 6(1):32-37 (1987) (6 pages)
		Uno, S., Asmussen, E., "Selected variables in bonding to dentin", Scand. J. Dent. Res. 1992: 100: 130-2 (2 pages)
RL		G.L. Unterbrink and R. Muessner, "Influence of light intensity on two restorative systems", J. Dent., vol. 23, no. 3, pp. 183-189 (1995) (7 pages).

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Form PTO-1449

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Docket Number (Optional)

03761.046/5061.18

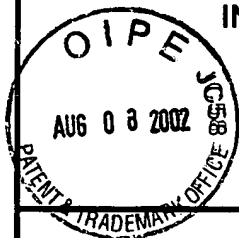
Application Number

10/073,823

Applicant Cao

Filing Date 02/11/02

Group Art Unit 2873



U.S. PATENT APPLICATIONS

EXAMINER INITIAL	SERIAL NUMBER	FILING DATE	Title	Inventor		
RL	10/080,489	February 22, 2002	Light-Curing Device with Detachably Interconnecting Light Application	Dan E. Fischer, DDS Bruce S. McLean		
	10/068,397	February 5, 2002	Curing Light with Plurality of LED's and Corresponding Lenses	Dan E. Fischer, DDS Bruce S. McLean		
	10/068,103	February 5, 2002	Lightweight Hand Held Dental Curing Devices	Dan E. Fischer, DDS Bruce S. McLean		
	10/044,346	January 11, 2002	Optical Lens Used to Focus LED Light	Bruce S. McLean Vasily Nosov		
	10/024,110	December 17, 2001	Heat Sink with Geometric Arrangement of LED Surfaces	Robert R. Scott		

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

RL	Email from Jens Jenkins [Jjenkins@wnspat.com] to Dan McCarthy Re: Pending Application Information dated Wednesday, April 03, 2002 (2 pages) and listing 5 pending U.S. patent applications.

EXAMINER RL	DATE CONSIDERED 9/24/2004
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Applicant Cao

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Group Art Unit 2873

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
RL	DE 25 57 920 B2	3/20/1980	Germany	A61C 5/04			X
↓	DE 29 27 260 A1	2/28/1980	Germany	A61N 5/06			x
RL	1 570 507	12/8/1976	Great Britain	A61N 5/06		x	
	0 339 841 B1	2/11/1989	European Patent Specification	C08P 2/50		x	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)


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	<div>Applicant</div> <div>Cao</div>	
	<div>Filing Date</div> <div>02/11/02</div>	<div>Group Art Unit</div> <div>2873</div>

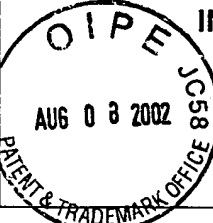
U.S. PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

RL	A. Mehl, H. Staunau, D. Schreyger, K.H. Kunzelmann, R. Hickel, LMU University Dental School, D-80336 Munich Germany, 1 page abstract, Journal of Dental Research, vol. 74, 1995, special issue p. 462.
↓	Sakaguchi and Berge, "Light Intensity Effects on Degree of Cure Posterior Composite", #1972, IADR 1997 (4 pages).
	Shigero Uno and Erik Asmussen, "Marginal Adaptation of A Restorative Resin Polymerized At A Reduced Rate" (5 pages).
	Peter Koran & Ralf Kurschner, "Effect of sequential versus continuous irradiation of a light cured resin composite on shrinkage, viscosity, adhesion, and degree of polymerization, CE Article #3-198, American Journal of Dentistry, vol 11, No. 1, February 1998 (6 pages).
	A. Mehl, R. Hickel, K.H. Kunzelmann, Dental School Munich Germany, "Physical properties and gap formation of light cured composites with and without softstart-polymerization" faxed copy dated May 30, 1996 (27 pages).
↓	K.J. Reinhardt and J. Vahl, "Uncertainties in the Testing of Photopolymers" 11 pages.
↓	A.J. Fellzer, L.H. Dooren, A.J. de Gee, and C.L. Davidson, "Influence of light intensity on polymerization shrinkage and integrity of restoration cavity interface", Eur J. Oral Sci. 1995; 103: 322-326 (5 pages).
RL	A. Mehl, M. Sobota, R. Hickel, "Soft start polymerization of composites in class V cavities"(10 pages).
	Saliha S. Davidson-Kaban, Carel L. Davidson, Albert J. Feilzer, Anton J. de Gee, Nejdett Erdilek, "The effect of curing light variations on bulk curing and wall to wall quality of two types and various shades of resin composites", Dent Mater 12:344-352, November 1997 (9 pages)

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U.S. PATENT DOCUMENTS

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EXAMINER 	DATE CONSIDERED <u>9/24/2004</u>
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<p>Form PTO-1449</p> <p style="text-align: center;">INFORMATION DISCLOSURE CITATION IN AN APPLICATION</p> <p style="text-align: center;">(Use several sheets if necessary)</p> <div style="border: 1px solid black; border-radius: 50%; width: 100px; height: 100px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="text-align: center;"> <p>O I P E</p> <p>AUG 08 2002</p> <p>3058</p> </div> </div>	<p>Docket Number (Optional)</p> <p style="font-size: 1.2em;">03761.046/5061.18</p>	<p>Application Number</p> <p style="font-size: 1.2em;">10673,823</p>
<p>Applicant</p> <p style="text-align: center;">Cao</p>		
<p>Filing Date</p> <p style="font-size: 1.2em;">02/11/02</p>		<p>Group Art Unit</p> <p style="font-size: 1.2em;">2873</p>

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
RL	6,328,456	12/11/2001	Mize	362	311	3/24/2000
	6,208,788	3/27/2001	Nosov	385	121	7/29/1998
	6,200,134	3/13/2001	Kovac et al	433	29	1/20/1998
	6,103,203	8/15/2000	Fischer	422	186	8/15/2000
	6,099,520	8/8/2000	Shmoji	606	2	6/30/1998
	6,089,740	7/18/2000	Forehand et al	362	573	1/8/1998
	6,008,264	12/28/1999	Ostler et al	522	4	4/26/1998
	5,912,470	6/15/1999	Eibofner et al	250	504H	
	5,980,295	6/1/1999	Kawata	433	29	
	5,908,294	6/1/1999	Schlick et al	433	29	
	5,797,740	8/25/1998	Lundvik	433	29	
	5,791,898	8/11/1998	Maissami	433	164	
	5,782,553	7/21/1998	McDermott	362	245	
	5,711,665	1/27/1998	Adam et al	433	9	
	5,660,461	8/26/1997	Ignatius et al	262	241	
	5,521,392	5/28/1996	Kennedy et al	250	492.1	
	5,485,317	1/16/1996	Perissinotto et al	359	712	
	5,457,611	10/10/1995	Verderber	362	32	
	5,350,834	9/27/1994	Bobsein et al	528	485	
	5,348,552	9/20/1994	Nakajima et al	606	13	
	5,238,744	8/24/1993	Williams et al	428	412	
	5,151,520	9/29/1992	Gottschalk et al	548	110	
	5,139,495	8/18/1992	Daikuzono	606	17	
	4,936,776	6/26/1990	Kwiatkowski	433	220	
	4,839,566	6/13/1989	Herold et al	31	308	
	4,698,730	10/6/1987	Sakai et al	362	311	
	4,308,120	12/29/1981	Penneweiss et al	204	159.23	
	4,281,366	7/28/1981	Wurster et al	362	32	
	4,229,658	10/21/1980	Gosner	250	504	
	4,184,196	1/15/1980	Moret et al	433	29	
4,149,086	4/10/1979	Nath	250	504		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<p>EXAMINER</p> <p style="font-size: 1.5em;">RL</p>	<p>DATE CONSIDERED</p> <p style="font-size: 1.5em;">9/24/2004</p>
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